

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No. : 7,274,331 Confirmation No. 3963  
Inventor : MARKUS HEINIGER et al.  
Issued : September 25, 2007  
Title : PHASE-SHIFTING SYSTEM AND ANTENNA FIELD  
COMPRISING SUCH A PHASE-SHIFTING SYSTEM  
Examiner : Benny T. Lee  
Customer No. : 28289

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

ATTENTION: Decision and Certificate of Correction Branch  
Patent Issue Division

REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT  
FOR PTO MISTAKE (37 C.F.R. 1.322(a))

Sir:

In accordance with 35 U.S.C. §254, we attach hereto Form PTO/SB/44 and a copy of proof of PTO errors and request that a Certificate of Correction be issued in the above-identified patent. The following errors appear in the patent as printed:

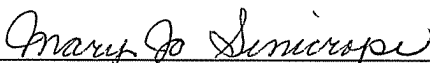
Face of the Patent: See Item (54) "PHASE-SHIFTING SYSTEM USING A DISPLACEABLE DIELECTRIC AND PHASE ARRAY ANTENNA COMPRISING SUCH A PHASE-SHIFTING SYSTEM" should read  
-- PHASE-SHIFTING SYSTEM AND ANTENNA FIELD COMPRISING SUCH A PHASE-SHIFTING SYSTEM --  
(See the Issue Fee Payment Form PTOL-85, mailed August 20, 2007.)

With a few exceptions, the corrections made in the whole substitute specification were not entered. Many of these corrections were suggested by the Examiner in the Office Action mailed July 24, 2006. The corrections that were not entered are as follows:

Column 1, after line 12 and before "2. Description of Related Art", **insert the following paragraph:** -- Such a phase shifter arrangement or such an antenna array is disclosed, for example, in the document US-B1-6,310,585. --

I hereby certify that this correspondence is being  
electronically submitted to the United States Patent and Trademark  
Office on January 4, 2008.

01/04/2008  
Date

  
Signature

Mary Jo Sinicrope  
Typed Name of Person Signing Certificate

Column 1, line 65, **delete** [[ (40 in FIG. 1; 440 in FIG.3) ]]

Column 1, line 67, bridging Column 1, line 1, **delete** [[ (column 3, lines 65-65; column 5, lines 1-18) ]]

Column 2, line 10, **delete** [[ (415 in FIG. 3)]]

Column 2, line 12, **delete** [[ (420 in FIG. 3)]]

Column 2, after the title, "SUMMARY OF THE INVENTION", **delete** the paragraph from lines 25-29 and **insert** therefor the following paragraph:

-- It is therefore the object of the invention to develop a phase shifter arrangement of the type mentioned initially such that the disadvantages of the known phase shifter arrangements are avoided, and such that, in particular, the design is simplified and the desired functionality is reliably achieved, as well as to specify an antenna array having such a phase shifter arrangement. --

Column 3, line 16, "Particularly" should read -- A particular --

Column 4, line 5, after "fact that" **insert** --  $2n+1$  ( $n=1,2,2, \dots$ ) --

Column 4, line 5, after "antenna array", **delete** [[ $2n+1$  ( $n=1,2,2, \dots$ )]]

Column 4, after line 13 and before "DESCRIPTION OF THE DRAWINGS", **insert the following paragraph**: -- Further embodiments are described hereinafter. --

Column 4, lines 43-44, "(FIGS. 9A and B)" should read -- (FIGS. 9A and 9B) --

Column 4, line 56, "106, . . . , 114" should read -- 106, 107, 108, 109, 110, 111, 112, 113 and 114 --

Column 4, line 58, "106, . . . , 114" should read -- 106, 107, 108, 109, 110, 111, 112, 113 and 114 --

Column 4, line 59, "106a, b" should read -- 106a, 106b --

Column 4, line 61, "107, . . . , 114" should read -- 107, 108, 109, 110, 111, 112, 113 and 114 --

Column 4, line 62, "106a, b" should read -- 106a, 106b --

Column 4, line 66, "106, . . . , 114" should read -- 106, 107, 108, 109, 110, 111, 112, 113 and 114 --

Column 5, line 1, "106, . . . , 114" should read -- 106, 107, 108, 109, 110, 111, 112, 113 and 114 --

Column 5, line 1, "106a, b" should read -- 106a, 106b --

Column 5, line 3, "99a, b" should read -- 99a, 99b --

Column 5, line 5, "99a, b" should read -- 99a, 99b --

Column 5, line 7, "106, . . . , 114" should read -- 106, 107, 108, 109, 110, 111, 112, 113 and 114 --

Column 5, line 9, "91a, b, . . . , 98a, b" should read -- 91a, 91b, 92a, 92b, 93a, 93b, 94a, 94b, 95a, 95b, 96a, 96b, 97a, 97b, 98a, 98b --

Column 5, line 11, "91a, b, . . . , 98a, b" should read -- 91a, 91b, 92a, 92b, 93a, 93b, 94a, 94b, 95a, 95b, 96a, 96b, 97a, 97b, 98a, 98b --

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Column 5, lines 20-21, "91a, b, . . . , 98a, b" should read -- 91a, 91b, 92a, 92b, 93a, 93b, 94a, 94b, 95a, 95b, 96a, 96b, 97a, 97b, 98a, 98b --

Column 5, line 21, "99a, b" should read -- 99a, 99b --

Column 5, line 23, "91a, b, . . . , 94a, b" should read -- 91a, 91b, 92a, 92b, 93a, 93b, 94a, 94b --

Column 5, line 24, "99a, b" should read -- 99a, 99b --

Column 5, line 30, "99a, b" should read -- 99a, 99b --

Column 5, line 31, "106, . . . , 109 and 111, . . . , 114" should read -- 106, 107, 108, 109, and 111, 112, 113 and 114 --

Column 5, line 33, "91a, b, . . . , 98a, b" should read -- 91a, 91b, 92a, 92b, 93a, 93b, 94a, 94b, 95a, 95b, 96a, 96b, 97a, 97b, 98a, 98b --

Column 5, line 37, "99a, b" should read -- 99a, 99b --

Column 5, line 65, after "21, 22", insert -- (FIG. 2) --

Column 6, line 2, after "25, 26", insert -- (FIG. 2) --

Column 6, line 6, "61, . . . , 63" should read -- 61, 62, 63 --

Column 6, line 10, "81, . . . , 83" should read -- 81, 82, 83 --

Column 6, lines 10-11, "61, . . . , 63" should read -- 61, 62, 63 --

Column 6, line 13, after "slide 80" insert -- (FIG. 8) --

Column 6, line 16, after "slide 80" insert -- (FIG. 8) --

Column 6, line 21, after "lugs 25, 26" insert -- (FIG. 2) --

Column 6, line 35, "71, . . . , 73" should read -- 71, 72, 73 --

Column 6, line 37, "81, . . . , 83" should read -- 81, 82, 83 --

Column 6, line 41, "recesses 81, 82" should read -- recesses 84, 85 --

Column 6, line 47, "66a, c and 67a, c" should read -- 66a, 66c and 67a, 67c --

Column 6, line 49, "in FIG. 6, 5" should read -- in FIG. 6 --

Column 6, line 50, "66d, . . . , h" should read -- 66d, 66e, 66f, 66g, 66h --

Column 6, line 54, "66d, . . . , h" should read -- 66d, 66e, 66f, 66g, 66h --

Column 6, line 58, "66d, . . . , h" should read -- 66d, 66e, 66f, 66g, 66h --

Column 6, line 59, "66d, . . . , h" should read -- 66d, 66e, 66f, 66g, 66h --

Column 6, line 62, "66d, . . . , h" should read -- 66d, 66e, 66f, 66g, 66h --

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Column 7, line 12, "66d, . . . , h" should read -- 66d, 66e, 66f, 66g, 66h --

Column 7, line 32, "10a, b" should read -- 10a, 10b --

Column 7, line 38, "4A, B" should read -- 4A, 4B --

Column 7, lines 59-60, "51, 53" should read -- 51, 52, 53 --

Column 7, line 60, "61, . . . , 63" should read -- 61, 62, 63 --

Column 8, line 17, "90a, b" should read -- 90a, 90b --

Column 8, line 18, "91a, b, . . . , 98a, b" should read -- 91a, 91b, 92a, 92b, 93a, 93b, 94a, 94b, 95a, 95b, 96a, 96b, 97a, 97b, 98a, 98b --

Column 8, line 19, "91, . . . , 98" should read -- 91, 92, 93, 94, 95, 96, 97, 98 --

Column 8, line 20, "99a, b" should read -- 99a, 99b --

Column 8, line 22, "91, . . . , 98" should read -- 91, 92, 93, 94, 95, 96, 97, 98 --

Column 8, line 27, "91, . . . , 98" should read -- 91, 92, 93, 94, 95, 96, 97, 98 --

Column 8, line 29, "91, . . . , 98" should read -- 91, 92, 93, 94, 95, 96, 97, 98 --

Column 8, line 53, "the electrical" should read -- the electrical length ( $l_{elec}$ ) --

Column 8, line 54, "the mechanical length" should read -- the mechanical length ( $l_{mech}$ ) --

Column 8, line 55, "the electrical length is proportional to the phase:" should read -- the electric length ( $l_{elec}$ ) is proportional to the phase ( $\Phi$ ): --

Column 8, after the equation on line 60, insert the following:

-- where  $\epsilon_r$  = permittivity of the line; and  
 $\lambda$  = wavelength. --

(For all of the above corrections, see the Substitute Specification submitted October 24, 2006 and accepted by Examiner Benny T. Lee in an Office Action dated January 16, 2007. See the first paragraph on page 2 of the Office Action.)

Respectfully submitted,

THE WEBB LAW FIRM

By: 

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**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**

Page 1 of 7

PATENT NO. : 7,274,331  
APPLICATION NO.: 10/502,413  
ISSUE DATE : 9/25/2007  
INVENTOR(S) : Markus Heiniger et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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-- PHASE-SHIFTING SYSTEM AND ANTENNA FIELD COMPRISING SUCH A PHASE-SHIFTING SYSTEM --

Column 1, after line 12 and before "2. Description of Related Art", insert the following paragraph:  
-- Such a phase shifter arrangement or such an antenna array is disclosed, for example, in the document US-B1-6,310,585. --

Column 1, line 65, delete [[ (40 in FIG. 1; 440 in FIG.3) ]]

Column 1, line 67, bridging Column 1, line 1, delete [[ (column 3, lines 65-65; column 5, lines 1-18) ]]

**MAILING ADDRESS OF SENDER (Please do not use customer number below):**

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436 Seventh Avenue  
700 Koppers Building  
Pittsburgh, PA 15219

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

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Column 2, line 10, delete [[ (415 in FIG. 3)]]

Column 2, line 12, delete [[ (420 in FIG. 3)]]

Column 2, after the title, "SUMMARY OF THE INVENTION", delete the paragraph from lines 25-29 and insert therefor the following paragraph:

-- It is therefore the object of the invention to develop a phase shifter arrangement of the type mentioned initially such that the disadvantages of the known phase shifter arrangements are avoided, and such that, in particular, the design is simplified and the desired functionality is reliably achieved, as well as to specify an antenna array having such a phase shifter arrangement. --

Column 3, line 16, "Particularly" should read -- A particular --

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Column 4, line 5, after "antenna array", delete [[ $2n+1$  ( $n=1,2,2, \dots$ )]]

Column 4, after line 13 and before "DESCRIPTION OF THE DRAWINGS", insert the following paragraph: -- Further embodiments are described hereinafter. --

Column 4, lines 43-44, "(FIGS. 9A and B)" should read -- (FIGS. 9A and 9B) --

Column 4, line 56, "106, . . . , 114" should read --106, 107, 108, 109, 110, 111, 112, 113 and 114--

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Column 5, line 1, "106, . . . , 114" should read -- 106, 107, 108, 109, 110, 111, 112, 113 and 114 -

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Column 5, line 3, "99a, b" should read -- 99a, 99b --

Column 5, line 5, "99a, b" should read -- 99a, 99b --

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Column 5, line 9, "91a, b, . . . , 98a, b" should read -- 91a, 91b, 92a, 92b, 93a, 93b, 94a, 94b, 95a, 95b, 96a, 96b, 97a, 97b, 98a, 98b --

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Column 5, lines 20-21, "91a, b, . . . , 98a, b" should read -- 91a, 91b, 92a, 92b, 93a, 93b, 94a, 94b, 95a, 95b, 96a, 96b, 97a, 97b, 98a, 98b --

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Column 5, line 30, "99a, b" should read -- 99a, 99b --

Column 5, line 31, "106, . . . , 109 and 111, . . . , 114" should read -- 106, 107, 108, 109, and 111, 112, 113 and 114 --

Column 5, line 33, "91a, b, . . . , 98a, b" should read -- 91a, 91b, 92a, 92b, 93a, 93b, 94a, 94b, 95a, 95b, 96a, 96b, 97a, 97b, 98a, 98b --

Column 5, line 37, "99a, b" should read -- 99a, 99b --

Column 5, line 65, after "21, 22", insert -- (FIG. 2) --

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Column 6, line 10, "81, . . . , 83" should read -- 81, 82, 83 --

Column 6, lines 10-11, "61, . . . , 63" should read -- 61, 62, 63 --

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Column 6, line 16, after "slide 80" insert -- (FIG. 8) --

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Column 6, line 47, "66a, c and 67a, c" should read -- 66a, 66c and 67a, 67c --

Column 6, line 49, "in FIG. 6, 5" should read -- in FIG. 6 --

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Column 6, line 50, "66d , . . . , h" should read -- 66d, 66e, 66f, 66g, 66h --

Column 6, line 54, "66d , . . . , h" should read -- 66d, 66e, 66f, 66g, 66h --

Column 6, line 58, "66d , . . . , h" should read -- 66d, 66e, 66f, 66g, 66h --

Column 6, line 59, "66d , . . . , h" should read -- 66d, 66e, 66f, 66g, 66h --

Column 6, line 62, "66d , . . . , h" should read -- 66d, 66e, 66f, 66g, 66h --

Column 7, line 6, "66d, . . . , h" should read -- 66d, 66e, 66f, 66g, 66h --

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Column 7, line 12, "66d, . . . , h" should read -- 66d, 66e, 66f, 66g, 66h --

Column 7, line 32, "10a, b" should read -- 10a, 10b --

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Column 8, line 19, "91, . . . , 98" should read -- 91, 92, 93, 94, 95, 96, 97, 98 --

Column 8, line 20, "99a, b" should read -- 99a, 99b --

Column 8, line 22, "91, . . . , 98" should read -- 91, 92, 93, 94, 95, 96, 97, 98 --

Column 8, line 27, "91, . . . , 98" should read -- 91, 92, 93, 94, 95, 96, 97, 98 --

Column 8, line 29, "91, . . . , 98" should read -- 91, 92, 93, 94, 95, 96, 97, 98 --

Column 8, line 53, "the electrical" should read -- the electrical length (Ielec ) --

Column 8, line 54, "the mechanical length" should read -- the mechanical length (Imech) --

Column 8, line 55, "the electrical length is proportional to the phase:" should read -- the electric length (Ielec ) is proportional to the phase ( $\Phi$ ): --

Column 8, after the equation on line 60, insert the following:

-- where  $\epsilon_r$  = permittivity of the line; and  
 $\lambda$  = wavelength. --

MAILING ADDRESS OF SENDER (Please do not use customer number below):

The Webb Law Firm  
436 Seventh Avenue  
700 Koppers Building  
Pittsburgh, PA 15219

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